APPENDIX

1. (Twice Amended) A method of searching for a string in a lexical cache, comprising the computer-implemented steps of:

generating a key based on the string;

identifying a lexical container from among a plurality of lexical containers based on a length of the key, said lexical containers associated with respective key lengths and configured to hold respective maximum numbers of entries based on the respective key lengths; and

searching the lexical container for an entry associated with the string based on the key, wherein at least one of the lexical containers is configured to hold a different number of entries than at least another one of the lexical containers.

5. (Once Amended) The method of claim 1, wherein the step of identifying a lexical container includes the steps of:

generating a prefix based on the key; and

identifying the lexical container from among the plurality of the lexical containers based on the length of the key and the prefix.

15. (Once Amended) A method of searching for a string in a lexical cache, comprising the computer-implemented steps of:

compressing the string to generate a key;

identifying a hash table from among a plurality of hash tables based on a length of the key, said hash table containing sequences of slots for holding respective key values, each of

said sequences of slots corresponding to a respective hash value and a number of slots being based on a respective key length, wherein at least one of the hash tables is configured to hold a different number of slots than at least another one of the hash tables;

computing a hash value based on the key;

using said hash value to locate a beginning of the particular sequence of slots that correspond to said hash value;

searching the particular sequence of slots for a slot holding a key value matching the key; and

if a slot having a key value matching the key is found in the particular sequence of slots, but is not at the beginning of said particular sequence of slots, then moving a relative position of the key value within the particular sequence of slots toward the beginning of the particular sequence of slots.

16. (Twice Amended) A computer-readable medium bearing instructions for searching for a string in a lexical cache, said instructions arranged, when executed by one or more processors, to cause the one or more processors to perform the steps of:

generating a key based on the string;

identifying a lexical container from among a plurality of lexical containers based on a length of the key, said lexical containers associated with respective key lengths and configured to hold respective maximum numbers of entries based on the respective key lengths; and

searching the lexical container for an entry associated with the string based on the key,

wherein at least one of the lexical containers is configured to hold a different number of entries than at least another one of the lexical containers.

20. (Once Amended) The computer-readable medium of claim 16, wherein the step of identifying a lexical container includes the steps of:

generating a prefix based on the key; and

identifying the lexical container from among the plurality of the lexical containers based on the length of the key and the prefix.

30. (Once Amended) A computer-readable medium bearing instructions for searching for a string in a lexical cache, said instructions arranged, when executed by one or more processors, to cause the one or more processors to perform the steps of:

compressing the string to generate a key;

identifying a hash table from among a plurality of hash tables based on a length of the key, said hash table containing sequences of slots for holding respective key values, each of said sequences of slots corresponding to a respective hash value and a number of slots being based on a respective key length, wherein at least one of the hash tables is configured to hold a different number of slots than at least another one of the hash tables;

computing a hash value based on the key;

using said hash value to locate a beginning of the particular sequence of slots that correspond to said hash value;

searching the particular sequence of slots for a slot holding a key value matching the key; and

if a slot having a key value matching the key is found in the particular sequence of slots, but is not at the beginning of said particular sequence of slots, then moving a relative position of the key value within the particular sequence of slots toward the beginning of the particular sequence of slots.

31. (Once Amended) A method of storing a string in a lexical cache, comprising the computer-implemented steps of:

generating a key based on the string;

identifying a lexical container from among a plurality of lexical containers based on a length of the key, said lexical containers are associated with respective key lengths and configured to hold respective maximum numbers of entries based on the respective key lengths; and

storing the string in an entry in the lexical container based on the key,

wherein at least one of the lexical containers is configured to hold a different number of entries than at least another one of the lexical containers.

32. (Once Amended) A computer-readable medium bearing instructions for storing a string in a lexical cache, said instructions arranged, when executed by one or more processors, to cause the one or more processors to perform the steps of:

generating a key based on the string;

identifying a lexical container from among a plurality of lexical containers based on a length of the key, said lexical containers associated with respective key lengths and configured to hold respective maximum numbers of entries based on the respective key lengths; and

storing the string in an entry in the lexical container based on the key,

wherein at least one of the lexical containers is configured to hold a different number of entries than at least another one of the lexical containers.

35. (New) A method of providing a lexical cache, comprising the computer-implemented steps of:

allocating a plurality of lexical containers each configured to a respective maximum number of entries based on a key length; and

searching for one of the entries associated with a string within one of the plurality of lexical containers corresponding to a key generated based on the string,

wherein at least one of the lexical containers is configured to hold a different number of the entries than at least another one of the lexical containers.

36. (New) The method of claim 35, wherein the maximum number of entries in the allocating step is based on a logarithmic function of the key length.